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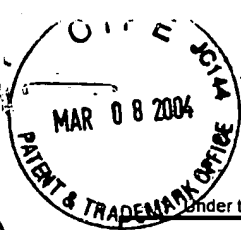
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Inventor(s): LUCA D'OTTONE

Title of Invention: A METHOD FOR PURIFYING NITRIC OXIDE

Enclosed is a disclosure of the above-titled invention consisting of 2 sheets of description and 2 sheets of drawings. A check or money order in the amount of \$40 is enclosed to cover the fee (37 CFR 1.21(c)).

The undersigned, being a named inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document Program, and that they be preserved for a period of two years.

Luca D'Ottoni

Signature of Inventor

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03/04/04

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A Method for purifying Nitric Oxide

By

Luca D'Ottone

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(1) Background

In 1998, while performing chemical research regarding the reactivity of Nitric Oxide toward the hydroxyl radical, I discovered, reduced to practice and perfected a method and an apparatus for the purification of gaseous Nitric Oxide.

Nitric Oxide is a gas having no appreciable cross section in the UV visible region. Most common impurities for NO are NO₂ and other acidic oxides.

(2) Apparatus

The Apparatus consist in a series of two filters connected by an inert tubing system, and connected on one side to a collection tank and on another side to the source of impure nitric oxide.

The first filter is kept at a temperature below 0 °C ($T < 273.15$ K) by a thermostatic bath. Usually is cooled at the temperature of the dry-ice methanol slush.

The first filter is composed by a mixture of hydroxides of alkali and earth alkali metals. Said filter may be ASCARITE (registered trademark).

The second filter is a standard molecular sieve.

I found this apparatus extremely effective and convenient over the prior art.

(3) Method

The method consist in passing the impure nitric oxide gas from the storage tank through the first and the second filter, and collecting it in a collection bulb usually filled out at a pressure below atmospheric pressure, to avoid possible intake of oxygen gas.

(4) Results

I found the use of said method and said apparatus extremely convenient. I personally tested the purity of the nitric oxide with an optical multi-channel apparatus, and the final product was an extremely refined nitric oxide

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gas. Impurities were estimated to be less than 1 part per million in NO₂.

(5) References

US patents

5,670,125, 5,614,201, 5,417,850, 5,692,100

US patent Published applications

20020056289

Other references

Hughes, E.E. *J Chem. Phys.*, 1961, 35, 1531.

(5) Notarization

THIS SECTION IS FOR NOTARIZATION

PRINT SIGNATORY'S FULL NAME

Luca D'Ottoni

SIGNATURE (as it will appear on documents)

(NOTARY) I, Ana Milena Gonzalez as a notary public in the State of Florida, certify under the pains and penalty of perjury that I witnessed the signature of the aforementioned signatory Luca D'Ottoni, and the individual's identity was verified, on this date: March 3rd, 2004.

My commission expires on:



Ana Milena Gonzalez
Commission #DD265827
Expires: Nov 09, 2007

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[Signature]

03/03/04

